

What is claimed is:

1. A retarder comprising:
a substrate and disposed on or above the substrate,
at least two adjacent layers respectively formed of a
composition comprising a liquid-crystalline compound, in which
liquid-crystalline molecules are fixed in an alignment state,
wherein no alignment layer is substantially disposed
between the two adjacent layers.
2. The retarder of claim 1, wherein the lower layer of
the two layers has an upper surface subjected to a rubbing
treatment and the upper layer of the two layers is disposed in
contact with the rubbed surface of the lower layer.
3. The retarder of claim 2, wherein the lower layer is
formed of a composition comprising the liquid-crystalline
compound and an additive.
4. The retarder of claim 3, wherein the additive is a
polymer.
5. The retarder of claim 4, wherein the additive is a
modified polyvinyl alcohol.
6. The retarder of claim 5, wherein the modified polyvinyl
alcohol has a hydrocarbon group of not greater than 9 carbon
atoms.

7. The retarder of claim 6, wherein the modified polyvinyl alcohol is denoted by Formula (PX):

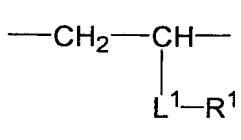
Formula (PX)



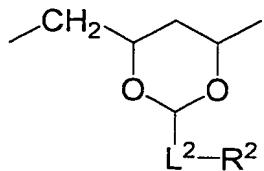
where "Val" is a vinyl alcohol based repeating unit, "HyD" is a repeating unit having a hydrocarbon group of not greater than 9 carbon atoms, "VAc" is a vinyl acetate based repeating unit, x is 20 to 95 wt%, y is 2 to 98 wt%, and z is 0 to 30 wt%.

8. The retarder of claim 7, wherein "HyD" is denoted by Formula (HyD-I) or (HyD-II):

(HyD-I)



(HyD-II)



where L^1 is a divalent linking group selected from the group consisting of $-\text{O}-$, $-\text{CO}-$, $-\text{SO}_2-$, $-\text{NH}-$, an alkylene group, arylene group and any combinations thereof; L^2 is a single bond or a divalent linking group selected from the group consisting of $-\text{O}-$, $-\text{CO}-$, $-\text{SO}_2-$, $-\text{NH}-$, an alkylene group, arylene group and any combinations thereof; and R^1 and R^2 respectively denote a hydrocarbon group of not greater than 9 carbon atoms.

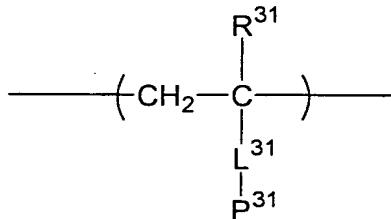
9. The retarder of claim 4, wherein the polymer is a non-liquid-crystalline polymer having a cross-linkable group.

10. The retarder of claim 9, wherein the non-liquid-crystalline polymer comprises a repeating unit

denoted by Formula (III):

Formula (III):

Formula (III)



where R^{31} is a hydrogen atom or a C1-4 alkyl, P^{31} is a monovalent group having an ethylenic unsaturated group, and L^{31} is a single bond or divalent group.

11. The retarder of claim 10, wherein R^{31} is hydrogen or methyl; P^{31} is a monovalent group including an acryloyl, methacryloyl or styryl; and L^{31} is an arylene group, $*-\text{COO}-$, $*-\text{CONH}-$ or $*-\text{OCO}-$ which are respectively bonded to a main chain at the * site.

12. The retarder of claim 10, wherein the non-liquid-crystalline polymer is a copolymer comprising a repeating unit denoted by the Formula (III) and at least one repeating unit not having any cross-linkable groups.

13. The retarder of claim 9, wherein the non-liquid-crystalline polymer has a smaller δa value, which is calculated with three-dimensional SP value, than that of the liquid-crystalline compound.

14. The retarder of claim 2, wherein the slow axes of the lower layer and the upper layer are not parallel to each other.

15. The retarder of claim 2, wherein an angle between a slow axis of the lower layer and a slow axis of the upper layer is substantially 60 degrees, one of the layers generates a phase difference of π at 550 nm and another generates a phase difference of $\pi/2$ at 550 nm.

16. A circular polarizer comprising:

a retarder comprising a substrate and disposed on or above the substrate, at least two adjacent layers respectively formed of a composition comprising a liquid-crystalline compound, in which the liquid-crystalline molecules are aligned in an alignment state,

wherein an angle between the slow axes of the two layers is substantially 60 degrees, one of the layers generates a phase difference of π at 550 nm, the other layer generates a phase difference of $\pi/2$ at 550 nm, no alignment layer is substantially disposed between the two layers, the lower layer of the two layers has an upper surface subjected to a rubbing treatment, and the upper layer of the two layers is disposed in contact with the rubbed surface of the lower layer;

a linear polarizer disposed nearer to the layer generating a phase difference of π than the other layer,

wherein an angle between a slow axis of the layer generating a phase difference of π and a transmittance axis of the linear polarizer is substantially 15 or 75 degrees.

17. A liquid-crystal display comprising a retarder of claim 1.

18. A liquid-crystal display comprising a circular polarizer of claim 16.

19. A process for preparing a retarder comprising a substrate, a lower layer and an upper layer disposed on or above the substrate in this order wherein both of the layers respectively formed of a composition comprising a liquid-crystalline compound, in which the liquid-crystalline molecules are fixed in an alignment, and no alignment layer is disposed between the layers, comprising:

a rubbing step of rubbing an upper surface of the lower layer; and

a step of preparing the upper layer in contact with the rubbed surface of the lower layer.

20. The process of claim 19, comprising a step of applying the composition comprising the liquid-crystalline compound and a non-liquid-crystalline polymer to a surface of the substrate or to a surface above the substrate surface, aligning and fixing the liquid-crystalline compound in an alignment state, thereby preparing a lower layer before the rubbing step, wherein the step of preparing the upper layer is a step of applying a composition comprising a liquid-crystalline compound to the rubbed surface, aligning and fixing the liquid-crystalline compound in the alignment state, thereby preparing the upper layer.